AMENDMENTS TO THE CLAIMS

1. (Original) A method of changing the sensory perception of an animal, wherein the method comprises administering to the inner ear an expression vector comprising a nucleic acid sequence encoding an atonal-associated factor, wherein the nucleic acid sequence is expressed to produce the atonal-associated factor resulting in generation of sensory hair cells that allow perception of stimuli in the inner ear.

2. (Original) The method of claim 1, wherein the animal is a human.

3. (Currently Amended) The method of claim 1 ~~or claim 2~~, wherein the atonal-associated factor is a β-helix-loop-helix transcription factor.

4. (Original) The method of claim 3, wherein the β-helix-loop-helix transcription factor is MATH1.

5. (Original) The method of claim 3, wherein the β-helix-loop-helix transcription factor is HATH1.

6. (Currently Amended) The method of claim 1 ~~any of claims 1-5~~, wherein the expression vector is a viral vector.

7. (Original) The method of claim 6, wherein the viral vector is an adeno-associated viral vector.

8. (Original) The method of claim 6, wherein the viral vector is an adenoviral vector.

9. (Original) The method of claim 8, wherein the adenoviral vector is replication deficient.

10. (Currently Amended) The method of ~~claim 8 or~~ claim 9, wherein the adenoviral vector comprises an adenoviral genome having a deficiency in at least one replication-essential gene function of the E1 region.

11. (Currently Amended) The method of claim 10 ~~any of claims 8-10~~, wherein the adenoviral vector comprises an adenoviral genome having a deficiency in at least one replication-essential gene function of the E4 region.

12. (Original) The method of claim 11, wherein the adenoviral vector comprises a spacer in the E4 region.

13. (Currently Amended) The method of claim 1 ~~any of claims 1-12~~, wherein the method further comprises administering to the inner ear a viral vector comprising a nucleic acid sequence encoding a neurotrophic agent.

14. (Original) The method of claim 13, wherein the viral vector comprising the nucleic acid sequence encoding the atonal-associated factor and the viral vector comprising the nucleic acid sequence encoding the neurotrophic agent are the same viral vector.

15. (Currently Amended) The method of claim 13 ~~or claim 14~~, wherein the neurotrophic agent is a tumor growth factor, brain-derived neurotrophic factor, or nerve growth factor.

16. (Currently Amended) The method of claim 1 ~~any of claims 1-15~~, wherein a disorder caused by a defect or loss of sensory hair cells is treated therapeutically or prophylactically.

17. (Original) The method of claim 16, wherein the disorder is hearing loss.

18. (Original) The method of claim 16, wherein the disorder is a balance disorder.

19. (Currently Amended) The method of claim 1 ~~any of claims 1-18~~, wherein sensory hair cells are generated from adult differentiated cells of the inner ear.

20. (Currently Amended) The method of claim 1 ~~any of claims 1-19~~, wherein sensory hair cells are generated in scarred epithelia of the inner ear.

21. (Currently Amended) The method of claim 1 ~~any of claims 1-20~~, wherein the expression ~~viral~~ vector further comprises a moiety that binds a receptor of scarred epithelial cells and that facilitates transduction of scarred epithelial cells by the expression vector.

22. (Original) A method of generating a hair cell in differentiated sensory epithelia *in vivo*, wherein the method comprises contacting differentiated sensory epithelial cells with an adenoviral vector (a) comprising an adenoviral genome deficient in one or more replication-essential gene functions of the E1 region, the E4 region, and, optionally, the E3 region (b) comprising a spacer in the E4 region, and (c) comprising a nucleic acid sequence encoding an atonal-associated factor, wherein the nucleic acid sequence is expressed to produce the atonal-associated factor such that a hair cell is generated.

23. (Original) The method of claim 22, wherein all or part of the E3 region of the adenoviral genome of the adenoviral vector is removed.

24. (Currently Amended) The method of claim 22 ~~or claim 23~~, wherein the differentiated sensory epithelial cells are located in an ear.

25. (Original) The method of claim 24, wherein a dose of adenoviral vector is administered to the ear in a single injection.

26. (Original) The method of claim 24, wherein multiple doses of adenoviral vector are administered to the ear.

27. (Original) An adenoviral vector having a deficiency in at least one replication-essential gene function of the E4 region of the adenoviral genome and a nucleic acid sequence coding for an atonal-associated factor.

28. (Original) The adenoviral vector of claim 27, wherein the adenoviral genome is further deficient in at least one replication-essential gene function of the E1 region of the adenoviral genome.

29. (Currently Amended) The adenoviral vector of claim 27 ~~or claim 28~~, wherein the adenoviral genome lacks the entire E4 region of the adenoviral genome.

30. (Original) The adenoviral vector of claim 29, wherein the E4 region of the adenoviral genome has been replaced with a spacer element having at least 15 base pairs.

31. (Currently Amended) The adenoviral vector of claim 27 ~~any of claims 27-30~~, wherein the atonal-associated factor is MATH1.

32. (Currently Amended) The adenoviral vector of claim 27 ~~any of claims 27-30~~, wherein the atonal-associated factor is HATH1.

33. (Currently Amended) The adenoviral vector of claim 27 ~~any of claims 27-32~~, wherein the adenoviral vector further comprises a neurotrophic agent.

34. (Currently Amended) A replication competent adenovirus-free composition comprising the adenoviral vector of claim 27 ~~any of claims 27-33~~ and a pharmaceutically acceptable carrier.

This listing of claims replaces all prior versions, and listings, of claims in the application.